

AUTOMATED MANAGEMENT SYSTEM

BACKGROUND:

This invention relates to an automated management system and in particular to a landscaping bid estimation system and method.

5 As the market place for consumer services tighten, companies are always looking for new and innovative ways to provide higher quality service and reduced cost. The market for landscaping consumers is no different. Landscaping companies typically perform different services for businesses and homeowners ranging from up-keep and maintenance of existing grounds (e.g., mowing, tree trimming and pruning, leaf
10 collection, edging, mulching brush removal), installation (e.g., new plantings, lighting, retaining walls, patios, etc.) and consulting/designing for future developments.

These services may be provided on a one time basis or as part of a service contract (e.g., weekly, monthly, seasonally, or yearly). When contacted by a potential customer, the service provider is usually asked to quote a rate or price at which the
15 requested service can be provided. In many instances, this may take the form of telephone call to the service provider requesting a quote for the job. This poses a particular problem to the service provider. Often potential customers want an immediate quote of an estimate over the phone. This places the service provider in an awkward position. In this case, it is difficult to provide an estimate without seeing the size of the
20 job being requested.

For example, for landscaping the cost of the service, such as, weekly mowing, depends on the size of the job. However, the service provider does not know the size of

the job. One option is for the service provider to have a standard rate. However, this can result in giving a quote that is too large or too small for any particular job, either of which could result in loss of the customer.

As a result, most service providers must send an employee to the customer's site
5 to inspect it and generate an estimate based on the inspection. While this is a practice
excepted by many customers (and service providers), people are increasingly busy and do
not want to be bothered with setting up an appointment time. In addition, some
consumers demand instant information on pricing. If the service provider insists on
visiting the potential customer to give an estimate, the service provider risks losing the
10 customer's potential business. Furthermore, it costs the service provider time and money
to train employees to provide the skills necessary to provide estimates and in travel to and
from the potential job site. In addition, estimates given are customarily done without
charge.

15 SUMMARY

It is therefore an object of the invention to provide an accurate estimate of the cost
of providing a service in real time without having to visit the customer's site.

It is therefore an object of the invention to provide estimates without the need to
train an employee to perform the task or consume service provider resources.

20 It is yet another object of the invention to gain a competitive advantage over
competitor by providing free an accurate estimates with minimal effort.

It is yet another object of the invention to provide a means of licensing service provider franchises to different areas and provide a database of information that allows the service provider to accurately estimate the cost of potential jobs for perspective clients and provide accurate quotes to those clients.

5 According to an exemplary embodiment of the present invention, the foregoing and other objects are accomplished through implementation of a bid estimating system and method. According to an exemplary embodiment of the invention, a processor accesses a database of existing customer information specific to that customer. The processor identifies information specific to the customer stored in the database and
10 determines an estimate, in real time, for the services provided based on the customer specific information. The estimate is then conveyed to the customer for their approval.

 According to one preferred embodiment the service provider is a landscaper. According to this embodiment the potential customer provides the customer's address. A processor then access a real estate database for the address and determines a bid based on
15 the database information corresponding to the address and the information can be obtained from a public database. Alternatively, a landscaper can create accurate bids for mailers simply by identifying an address and selecting the types of services to be performed in order to determine the cost of the services. According to an exemplary embodiment the bid can be generated and displayed using a spreadsheet.

20 According to the invention, a service provider is able to determine accurate bids without having to spend valuable time visiting the potential customers home or training other how to make accurate estimates. In addition, when the service provider receives

cold calls requesting estimate, the provider can give accurate estimates over the phone and thus prevent loss of potentially impatient customers who demand immediate satisfaction.

According to another embodiment of the invention, a database of information for various areas is maintained. The areas can be organized according to, for example, postal zip codes. Service providers serving customers in those areas could by access to the database and receive software to facilitate access or calculation of estimates, or both. Access to the database could be provided, for example, over the Internet. A service provider to access the database in order to received data or estimates or both for potential customers. A service provider could be licensed for one or more zip codes.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other features, objects, and advantages of the invention will be better understood by reading the following description in conjunction with the drawings, in which:

FIG. 1 is and exemplary block diagram according to an exemplary embodiment of the invention;

FIG. 2 shows an exemplary flow chart according to the invention; and

FIGs. 3, 4, and 5 are exemplary system displays for use with the present invention.

DETAILED DESCRIPTION

The various features of the invention will now be described with respect to the figures, in which like parts are identified with the same reference characters.

Turning to FIG. 1, a block diagram of an exemplary system is shown. According to the system shown in FIG. 1, a processor 101 is shown connected via communication device 105 to a database 102. The processor 101 can be a standalone personal computer (PC), or remote host/server, for example. A user interface 103 can be provided for communication with the processor 101. Those skilled in the art will appreciate that the user interface 103 could be a standalone computer located remotely from the processor 101 communicating via communication device 104, for example a modem, network, wireless, internet, or other communications medium. Alternatively, the user interface 103 could include a display and input devices, such as a keyboard and mouse and be directly connected to the processor 101 at the user's location, for example, by bus or serial cable and could be part of one standalone PC type unit. The database 102 could be located at the user's site in a storage medium such as RAM, disk (e.g., optical, hard, soft, compact, etc.), tape, buffer. Alternatively, the database 107 located at a remote location via the communications device, such as, modem, network, wireless, internet 120, or other communications medium.

The customer 110 could contact the service provider in any of the number of ways. For example, the customer 110 could call the service provider and request an estimate for performing a certain job. In addition, the customer 110 could access the service provider's processor or server 101 through a communication device 130, such as

a modem. According to yet another embodiment, the service provider could maintain a web page that is accessed by the customer 110 through the internet 120 as explained in further detail below using a browser running on a PC used to communicate with the service provider's processor/server 101.

5 According to the following description, an exemplary implementation of the system for use with a landscaping service provider will be shown, however, the invention could be used with other service providers according to the steps outlined below. According to this preferred embodiment, the user is a landscaping contractor, for example. Typically, the landscaper must give an estimation for the cost of providing
10 landscaping services to a customer for customer approval before commencing a job. According to the present invention, the method and system provided herein allow the contractor to determine an accurate bid for the services to be provided without the need to actually visit and inspect the customer's location.

 According to one aspect of the invention, the landscaper provides a customer
15 identification to the processor 101 via user interface 103. According to one preferred embodiment this can be an address. The service provider also enters a type of service to be provided. The processor 101 then determines an estimated price for the services by accessing customer information provided in the database 102 or 107 as described in further detail in conjunction with the exemplary flow chart shown in FIG. 2. According
20 to one exemplary embodiment the database is a real estate database, for example, Haines Company's "Criss+cross Plus Real Estate" database. Alternatively, any number of public

databases could be used or other means such as aerial or satellite photographs or property sketches or plats (which can be used to generate property information).

After the processor receives the customer information from the database 102 or 107 it determines the estimate according to a formula provided for the type of service to be rendered. The customer information can be inserted directly into a spread sheet (such as Excel from Microsoft) to determine the estimate. One skilled in the art will appreciate that the formula used to calculate the estimate service will depend on the service to be provided. Examples of such formulas and factors are given below. Alternatively, the estimates can be pre-calculated and stored for each potential customer. In other words, all of the service provided by the service provider are calculated based on available customer data stored in a database, such as the Haines database mentioned above and stored with a customer identification. An advantage of this method is the speed at which customer quotes can be accessed. Additionally, this information can be used to produce mailers for all potential customers in a zip code. The mailers can be sent to potential customers with real quotes for the services even though the service provider has never visited the location.

Turning to FIG. 2, the process begins as step 200. First, the potential customer is identified at step 201. This identification for the purpose of the landscaper could be the customer's address. Of course other IDs such as name, telephone number, social security, etc., could also be used. In step 220, a real estate database is accessed. Next, the customer's lot size is retrieved or determined from the information contained in the database corresponding to the customer's address or ID at step 230. In addition, the type

of service requested by the customer is also determined at step 260. Finally, an estimate for the requested service is determined based on the lot size, for example. This can be determined as follows.

In order to arrive at a more accurate estimate, the estimate can take into account
5 additional information in the database. For example, the size of the house (square
footage) can be subtracted from the lot size. In addition, the square footage can be
reduced by a factor if the home is multiple stories, for example, by the square footage of
an upper story. Furthermore, if there is additional information in the database, terrain,
pools, decks, outer buildings, such as a garage, etc. these can also be taken into account.
10 For example, if the terrain is steep, then a difficulty factor can be multiplied by the
estimate in order to increase the price. If the terrain is flat with no trees, the estimate
could be reduced. Additionally, information could be received from the customer.

In some instances, information may be missing or unavailable for a potential
customer's property. In this case, an estimate can still be provided to the potential
15 customer by accessing averages for service across an entire neighborhood. Although, it
may not be as accurate, using surrounding properties for an estimate can provide an
accurate estimate for the property in question. In addition, statistical averages could be
used for neighbors to check the neighbors are receiving similar rates. This can be good
for business as neighbors may be upset at substantial price discrepancies provided by the
20 same company.

A previously mentioned, the steps 220, 230, 235, 240 250 and 270 could be pre-
calculated for all services provided by the service provider. In this instance, a service

provider would determine the potential customer's ID and type of service requested and be provided with a quote for the service. In another embodiment, the service provider would only need to enter a potential customer's ID and a display, for example, could be provided with quotes for all potential services (as shown in FIG. 5, for example).

5 According to another exemplary embodiment, the customer could receive a bid by accessing a web page provided by the landscaper. For example, the landscaper could provide a web page via a server on the processor 101 or through an internet service provider (ISP). The customer would access the web page using a browser running on the customer's PC using an HTML or XML based language, for example. The web page can
10 contain advertising and direct the customer to enter requested information. For example, the customer would enter their name, address, phone number, email address, etc., and the types of services requested. The landscaper could then review the information and determine an estimate through the above-described procedure. The estimate could then be communicated to the customer via a telephone call or return email, for example.
15 Alternatively, the quote could be provided automatically. For example, a search engine on the server could execute a CGI script to look up customer information and download it to the server. The processor 101 could then determine an estimate from the downloaded information. Alternatively, mailers could be generated for addresses taken from the database specifying rates for services that are tailored to the identification (e.g., address).

20 Estimates for any number of services could be provided such as lawn mowing, candystripe mowing, power edging, leaf collection, seeding, aeration, de-thatching, upkeep, landscaping, mulching. Of course other household chores could be estimated the

using this information. For example, gutter cleaning could be provided based on the square footage and number of stories of the home listed. House cleaning could be determined based on the number rooms, bathrooms, square footage, etc.

According to one example, a customer telephones a landscape maintenance firm to request fall leaf removal services for his property at 5003 Namakagen Rd. The sales representative asks the customer for an identification. The identification is used to retrieve information about the customer's property from the database. As previously stated, the identification could be an address or phone number. In this example, the database contains mathematically and statistically calculated data used to derive landscape maintenance pricing specific to the customer's property.

In this hypothetical example, the service price was generated mathematically and statistically by first the determining the lot size for the property at 5003 Namakagen Rd. The lot size in this example is 0.301 acres. The lot size is multiplied it by 43560 to convert to square feed (i.e., 13111 sq.ft. of total land area).

Next, using the number of stories of the home, and the total sq.ft. of floor space in the home, it is determined how much area in sq.ft. the home takes up on the given property. In this instance, if the home is two stories, the number by the total sq.ft. of the home's floor area is divided by two. In this case the home has 1700 sq.ft. of floor area. This is divided by two to derive 850 sq.ft. of total area that the building takes up on the property.

Other structures that take up space can also taken into account, for example, a garage of 320 sq.ft (e.g., which can be derived by looking at the garage type, in this case,

a “detached garage” with a capacity of “2”cars). The average one car garage is approximately 160 sq.ft. and therefore a two car garage can be estimated as equal 320 sq.ft. Other factors can also be taken into consideration, such as a deck, a patio, or whatever may be helpful in determining total service area without having to visit or directly measure the specific property. Items like a pool would not be included in this calculation because in the fall most people will put a pool cover on there pool, and the leaves will need to be cleaned of the pool cover. After all public data for the property and other factors are taken into consideration, 11070 sq.ft. of structure take up space on the lot.

Finally, after the total area that structures take up on the given lot is subtracted from the total sq. ft of property, it is determined that 2041 sq.ft.area remains for the given service to be rendered. Next a price structure is applied to the service area with minimum prices, maximums prices, price brakes for different property sizes, basic dollars and cents per sq.ft. For example, a factor for a specific type of service can be multiplied by the square footage to determine the bid price or a range of prices. Alternatively, the square footage could be compared to a preset number and the price could be assigned based on the relation to the number (e.g., higher, lower, equal, etc.).

The following is an example of real estate raw data, comma delimited file, which can be imported into a program able to perform calculations:

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1, "748.40", "20882", "Md", "Patel, Jayashri G Et Al", "Gaithersburg", "21411 Woodfield
Rd",,,,, "116710", "748.40", "46684", "31600", "15084", "20882-
4853", "Unknown", "Unknown", "Unknown", "Unknown", "Unknown", "Laytonsville", "Woo
dfield Rd", "Md", "Montgomery County Public
Schools", "999", "Yes", "O", "Unknown", "Patel, Jayashri
G", "G", ".42", "77.169281", "Laytonsville", "Patel, Jayashri G Et Al", "Impsres Land Of
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5 Goshen", "39.208475", "Patel", "Residential", "21411", "Jayashri", "Gaithersburg", "700101",
 "R035", "21411 Woodfield Rd", "14866:015", "First American Title Insurance
 Company", "N", "Life Estate Of Beatrice Addison", "May-07-
 1997", "85000", "98.38", "N", "Deed", "May-12-1997", "May-02-1997", "2", "0", "14866 &
 020", "FHA", "First American Title Insurance Company", "2027", "May-12-1997", "May-
 02-1997", "111650", "Ft Mortgage Companies DBA Atlantic Coast Mortgage", "Patel,
 Ganesh D", "0100000033", "P", "1936", "Typical Single Family Unit Such
 As 1, 2 Or 3 Story", "864", "864", "Unknown", "Composition", "Lower", "1", "1", "1", "Hot
 Water
 10 Radiator", "Unk.", "Unk.", "Unk.", "Yes", "Unk.", "Unk.", "Unk.", "Unknown", "Frame", "Goo
 d", "1", "Residential", "None", "Unknown", "Unknown", "Unknow

Fig 3 is an example of price generation generated with an Excell spread sheet, and associated cell definitions with associated formulas found below. In this example, the cell definitions

are as follows:

[EC = LAWN MOWING] =IF(FG2<40,FG2,IF(FG2>59,FG2,IF(FG2>50,45,35)))

[FG = LAWN MULTIPLIER] =CEILING(IF(DZ2<3001,22,(DZ2/1000-6)*3+29),1)

[DZ = MOWED AREA SQFT] =(AK2*43560)-EE2

[AK2 = LOT SIZE IN ACERS]

[EE2 = NON MOWED AREA SQFT] =(CN2/(CX2+1)+CQ2)+(IF(DD2="Yes",1000,0))+(IF(DE2="Yes",100,0))+
 (IF(DF2="Yes",100,0))+(IF(DG2="Yes",200,0))+(IF(DH2="Yes",400,0))+
 (IF(DI2="Yes",200,0))+(IF(DJ2="Yes",400,0))

CN2= SQFT TOTAL OF FLOOR AREA IN A GIVEN HOUSE = HAINES GIVEN DATA INPUT

CX2= NUMBER OF STORES IN A GIVEN HOUSE = HAINES GIVEN DATA INPUT

CQ2= SQFT GARAGE = HAINES GIVEN DATA INPUT

DD2= HAS POOL (YES OR NO) = HAINES GIVEN DATA INPUT

DE2= HAS POLE BARN (YES OR NO) =HAINES GIVEN DATA INPUT

DF2= HAS PATIO (YES OR NO) =HAINES GIVEN DATA INPUT

DG2= HAS DECK (YES OR NO) = HAINES GIVEN DATA INPUT

DH2= HAS CONCRETE PAVING (YES OR NO) = HAINES GIVEN DATA INPUT

DI2= HAS CARPORT

DJ2= HAS BLACKTOP PAVING

Fig 4 is an example of Sales Person Interface. Fig 5 is an example of an example of administrator interface.

According to another embodiment of the invention, a database of information for various regions is maintained. The regions can be organized according to, for example, postal zip codes. Service providers serving customers in those areas could by access to the database and receive software to facilitate access or calculation of estimates, or both. For example, a database could be provided on a server. The server could be contacted directly using a communication line and interface. Alternatively, the server could be accessed through the Internet. A service provider would be granted access to the database through the server. The service provider purchases a password and a license for a specific region as demarcated by zip codes. The database provides quotes for the service provider for a specific region. The database could be downloaded to the service providers computer or the service provider could look-up specific potential customer Ids in the database. A service provider could be licensed for one or more zip codes. Additionally, one or more servers could be set up for different services. For example, each server could correspond to a web page dedicated to a specific service. Potential customers could also access the web as described above to receive quotes.

According to the present invention the customer does not have to waste time setting up an appointment for an estimate that the customer may or may not accept. In addition, the customer did not have to waste time by allowing several different companies estimate his land by visiting. The customer does not have to let strangers he has never

met wander his property in order for him to have a price quoted to him for a simple service such as leaf removal.

Customers can be solicited through the internet. Other customers can gained through direct mail campaigns where customers do not request bid but receive an Annual
5 Maintenance Estimate, which includes basic property maintenance items like mowing, fertilizing, weed, bug, and grub control, aeration, de-thatching, leaf removal, even gutter cleaning. The bids can be accurately given for the customer because the bids are tailored to the customer's property using the database and method described herein.

Customers can other be solicited over the Internet. Automatic quotes for services
10 for a customer's specific property's maintenance needs could be provided to customers over a web site called, for example, www.mownow.com using net-quote. In this embodiment customers have only to enter their address, for example, to receive a reasonable price for their property needs.

According to the present invention, a service provider is given a powerful tool to
15 provide estimated for services to be provided to customers. The service provider can quickly provide an accurate estimate without out having to travel to the location. This is a big advantage by saving time and money. In addition, the service provider is able to handle cold calls without having hedge on the estimate or risk the possibility of over or underbidding on any one project.

20 The present invention has been described by way of example, and modifications and variations of the exemplary embodiments will suggest themselves to skilled artisans in this field without departing from the spirit of the invention. The preferred

The scope of the invention is to be measured by the appended claims, rather than the preceding description, and all variations and equivalents that fall within the range of the claims are intended to be embraced therein.